III. REMARKS

In the Office Action, claims 33, 34, 37, 38 and 41 were rejected under 35 U.S.C. 101 as being directed to non-statutory subject matter for reasons set forth in the Office Action.

Claims 33-41 were rejected under 35 U.S.C. 103 as being unpatentable over Nieweglowski (WO 97/16025) in view of Yagasaki (US 5,428,396) for reasons set forth in the Action.

With respect to the rejections under 35 U.S.C. 101 and 103, various ones of the claims are amended, and the following argument is presented to distinguish the claimed subject matter from the teachings of the cited art, thereby to overcome the rejections, and to show the presence of allowable subject matter in the claims.

With respect to the rejections under 35 U.S.C. 101, claim 33 is amended to show that various steps of the method are performed by a decoder to meet the statutory guidelines that the subject matter is implemented by a machine. The "decoder" is believed to be a machine because numerous forms of decoders are known for providing the functions necessary for decoding audio and video signals, are available commercially, and may be purchased in the same fashion as office furniture.

Claim 33 is amended further to state the function of:

> "decoding encoded video information into an image based on the prediction error quantizer and the accuracy of the motion coefficients"

The quoted passage is provided to meet the statutory guidelines that there is a transformation of an article from one thing or state to another. In this case, the encoded video information is not visible to a person, but the resulting image based on the prediction error quantizer is visible to a person. Claims 34 and 41 depend from claim 33 and, therefore are believed to be free of rejection under 35 U.S.C. 101 in view of the amendment of the base claim 33.

Claim 37 is amended to change the preamble to read:

"A computer-readable storage medium containing a computer program which, upon execution by a computer, directs the computer to perform the method of", followed by a listing of the computer steps or functions. This is believed to place the claim in the requisite statutory form. In claim 38, which depends from claim 37, the preamble is amended to conform to the preamble of claim 37. Accordingly, the amendments to both of these claims are believed to have overcome the rejections under 35 U.S.C. 101.

With respect to the rejections of all of the claims under 35 U.S.C. 103, it is urged that any attempted combination of the teachings of Nieweglowski and Yagasaki would provide one with a determining of a prediction error quantizer from the encoded video (Nieweglowski), and a determining of an accuracy of motion coefficients (Yagasaki). In contrast, claim 33 recites "determining an accuracy of motion coefficients based on the prediction error quantizer". This represents a significant departure from the claimed subject matter because the combined teachings would not lead one to employ the prediction error quantizer for determining the accuracy of the motion coefficients.

In view of the foregoing amendments and arguments, it is requested that the arguments of the previous response be reconsidered.

As in the prior action, the examiner acknowledges (present Action, top of page 14) that Nieweglowski does not disclose determining an accuracy of motion coefficients, and states that Yagasaki discloses the determination of the range of accuracy values of the motion coefficients. Furthermore, the examiner concludes that it would have been obvious to one of ordinary skill in the art to combine the teachings of Nieweglowski and Yagasaki, as a whole, for accurately, efficiently encoding and decoding image data while maintaining high image quality and minimizing hardware requirements. Furthermore, as noted above, such combination of the two references would not lead to the claimed subject matter.

These observations also apply to the rejections of other ones of the claims. For example, in rejecting Claim 34, the examiner asserts that "Nieweglowski discloses receiving information indicating a motion coefficient quantizer". This was not found upon a reading of Nieweglowski. There is no mentioning of "accuracy" or "quantizer" or "quantization" in Nieweglowski.

In the rejection of claim 33, the examiner relies on Nieweglowski to show a method for decoding encoded video information with a determining of a prediction error quantizer fro the encoded video information, and wherein the prediction error quantizer is used to quantize prediction error transform coefficients. The examiner states that element 22 (Fig. 2) determines the prediction error quantizer from the encoded video information, and states further that element 3 (Fig. 1) is the motion field coding section that produces the motion coefficients, that element 21 (Fig. 2) obtains the motion coefficient data of the picture segment data, and that Fig. 5 discloses a motion field coder with quantization (page 8 at line 14 to page 9 at line 9).

A review of the text of Nieweglowski reveals no discussion of quantization. The terms quantize and quantization are not found in Nieweglowski. In contrast, this language is found in numerous locations in the present specification. For example, on page 17 (lines 12 -15) of the present specification, there is a teaching that the receiver determines the motion information quantizer with reference to a quantizer used to encode the prediction error information. Quantization of a motion coefficient is explained on page 14 with reference to equation 9, wherein q is a quantization parameter defining an interval between reconstruction points. With respect to the prediction error coding block 14 (Fig. 1, and page 3 at lines 4-11), the specification teaches the use of the discrete cosine transform (DCT), for which transform coefficients are quantized. As is well known, some components of the transform may have near-zero values, so the dropping of such terms in a quantization procedure results in little error. Transform coefficients of the prediction error, which are transmitted (lines 17-18) are used in an error decoding block 22. The specification teaches (page 21 at lines 34-38, Fig. 10) that the motion

coefficient removal block 63 determines which coefficients can be set to zero without excessive reduction in accuracy. The following paragraph discusses the use of the two-dimensional DCT.

Of particular significance (specification, page 22, beginning at line 10) is the selection of a suitable quantizer, and the statement (lines 26-28) that the size of the quantization interval used to quantize the motion coefficients is related to the quantization interval used in the quantization of the prediction error coefficients. This enables higher accuracy (based on prediction error) to be automatically transmitted with the motion information (first line on page 23). Transmission of this quantization information is discussed also on page 19 (lines 20-25) and depicted in Fig 9. This also serves as a basis for support of the statement in claim 33 which teaches: determining an accuracy of motion coefficients based on the prediction error quantizer. The words "based on" express the teaching of Fig. 9 represented by the line connecting the error decoding block 22 to the quantizer selection block 42 in the motion compensated prediction block 21'.

In contrast, with Nieweglowski, there is no drawing figure in Nieweglowski nor any textual passage in Nieweglowski relating to the foregoing function of communicating quantizer information from the error decoding block to the quantizer selection block.

Also, since Nieweglowski does not provide a discussion of quantization, it is not clear what in Nieweglowski would suggest to the examiner a teaching of quantization, unless the examiner believes it is inherent in the operations of the Nieweglowski equipment. For example, in Nieweglowski on page 3 at lines 4-21, there is a mathematical description of motion coefficients, and that it is advantageous to minimize the number of motion coefficients that are sent to a decoder. Description is provided with the aid of equations (3) which involve summations of terms having motion coefficients. Possibly the examiner regards elimination of some of these terms as quantization. It would be useful if the examiner would explain where in Nieweglowski there is the teaching of quantization.

The examiner on page 14 of the Action cites Yagasaki to teach the determination of the accuracy of the motion coefficients (col. 13 at lines 24-36, and col. 3 at lines 54-61). The passage in col. 3 at lines 54-61 teaches that it is desirable to provide for motion vector coding with varying degrees of accuracy. In col. 13 at lines 15-24. the signals S54 and S55 are referred to as flags for forward motion and backward motion vectors, and are disclosed in Figs. 4B and 7. The passage in col. 13 at lines 24-36 discusses, with respect to the motion vector circuit 16 of Fig. 7, that the signals S54 and S55 represent a degree of accuracy of the motion vector. These signals are mentioned previously, with reference to Fig. 4, in col. 6 at line 56, where they are said to be provided to a motion compensator 22. They are shown as exiting a memory 30 in Fig. 4B and being applied to the motion vector circuit 16 (Fig. 4B) and to a motion predictor 12 in Fig. 4A. It is possible to select one of the signals by a switch shown in Fig. 7 that is operated in response to a motion compensation signal S14.

Present claim 33 recites: determining an accuracy of the motion coefficients based on the prediction error quantizer. The examiner ignores the limitation of "based on", a matter emphasized in the client instructions. However, in the foregoing discussion of locations in Yagasaki which discuss the matter of accuracy with respect to the signals S54 and S55, there is no teaching of a relationship between the accuracy of the motion coefficients and the operation of a prediction error quantizer. Also, in the extensive discussion of columns 9-10 in conjunction with Fig. 11, there is provided a variable length coding table relating to motion vectors, but there is no discussion of a process of quantization of motion vectors or error quantization in conjunction with a relationship with accuracy.

It is noted that the examiner has continued to rely on Yagasaki for teaching accuracy based on prediction error quantization (see prior actions such as the action of March 14, 2007 on page 12, and the Action of November 2, 2007 on page 3). In view of the foregoing analysis of Yagasaki, it is urged that there can be no teaching in Yagasaki, in

the matter of motion coefficients, of accuracy based on prediction error quantization, as is called for by present claim 33.

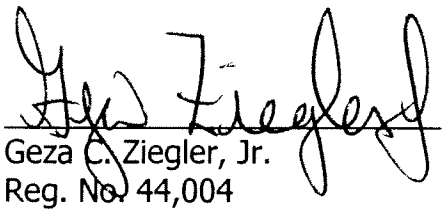
It is urged that, in view of the failure of Nieweglowski to disclose what quantization is actually employed, and the failure to provide a teaching of communicating the quantization to the motion compensated prediction of a receiver of the video image, Nieweglowski cannot serve as a basis for rejection of the claims. Similarly, as noted above, Yagasaki fails to disclose the aspect of accuracy. Thus, there could be no motivation to combine the two references, and any attempt at their combination would not teach or suggest the aforementioned important features of the claimed subject matter.

The foregoing argument, while directed specifically to the rejection of claim 33, applies also to the rejections of other ones of the claims, wherein the cited art is interpreted and applied similarly to the rejections of claim 33.

For all of the foregoing reasons, it is respectfully submitted that all of the claims now present in the application are clearly novel and patentable over the prior art of record, and are in proper form for allowance. Accordingly, favorable reconsideration and allowance is respectfully requested. Should any unresolved issues remain, the Examiner is invited to call Applicants' attorney at the telephone number indicated below.

The Commissioner is hereby authorized to charge payment for any fees associated with this communication or credit any over payment to Deposit Account No. 16-1350.

Respectfully submitted,



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